

Infection Connection

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January/February 2013
Issue 37

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**Bureau of Communicable Disease Control and Prevention
Missouri Department of Health and Senior Services**

Selected Diseases, Missouri, Year-to-Date 2013

Disease or Condition	Week 3 YTD	Week 2 YTD	Week 1 YTD	Five Year 1 st Quartile	Five Year Median	Five Year 3 rd Quartile	Change from Week 2 to Week 3	Change from Week 3 to 5- Year Median	Rate per 100,000
Animal Bites	122	122	61	No Data	303	No Data	0.00%	-59.80%	2.18
Brucellosis	1	1	0	No Data	0	No Data	0.00%	0.00%	0.02
Campylobacteriosis	22	14	5	30	32	33	57.10%	-31.30%	0.39
Cryptosporidiosis	2	1	1	4	5	6	100.00%	-60.00%	0.04
E Coli Shiga Toxin Positive	6	6	1	2	4	5	0.00%	50.00%	0.11
E. Coli O157 H7	9	6	1	1	1	1	50.00%	800.00%	0.16
Giardiasis	15	13	6	16	18	19	15.40%	-16.70%	0.27
Haemophilus Influenzae, Invasive	9	6	1	4	4	7	50.00%	125.00%	0.16
Hemolytic Uremic Syndrome	1	1	1	1	1	1	0.00%	0.00%	0.02
Hepatitis B (Pregnancy) Prenatal	3	3	1	8	9	10	0.00%	-66.70%	0.05
Hepatitis B Acute	2	2	1	3	3	4	0.00%	-33.30%	0.04
Hepatitis B Chronic Infection	21	13	5	19	26	27	61.50%	-19.20%	0.38
Hepatitis C Acute	2	2	0	1	1	1	0.00%	100.00%	0.04
Hepatitis C, Chronic Infection	110	52	48	273	290	291	111.50%	-62.10%	1.97
Influenza	18,253	17,226	14,960	852	1,045	2,876	6.00%	1646.70%	326.23
Legionellosis	2	1	0	1	1	2	100.00%	100.00%	0.04
Malaria	1	1	1	1	1	1	0.00%	0.00%	0.02
Meningococcal Disease	2	1	0	2	2	2	100.00%	0.00%	0.04
Pertussis	21	15	7	30	35	51	40.00%	-40.00%	0.38
Rabies Animal	2	2	2	1	1	1	0.00%	100.00%	0.04
Rabies Post Exposure Prophylaxis	5	4	4	No Data	8	No Data	25.00%	-34.20%	0.09
Salmonellosis	42	34	17	27	28	35	23.50%	50.00%	0.75
Staph Aureus VISA	6	4	1	No Data	0	No Data	50.00%	0.00%	0.11
Strep Disease, Group A Invasive	7	7	3	8	9	10	0.00%	-22.20%	0.13
Strep Pneumoniae, <5 Years, Invasive	4	4	3	3	3	5	0.00%	33.30%	0.07
Strep Pneumoniae, Drug-Resistant	14	9	7	7	10	12	55.60%	40.00%	0.25
Tb Infection	60	44	24	133	158	162	36.40%	-62.00%	1.07
Tuberculosis	3	0	0	1	2	3	0.00%	50.00%	0.05
Varicella (Chickenpox)	10	7	1	No Data	34	No Data	42.90%	-70.20%	0.18

All 2013 data are provisional as of Week 3, 2013.

NOTE: Weekly Disease reports can be viewed on the inTRANet at:
<http://dhssnet/ehcdp/WeeklyReports/StateHtml/Fr-StateofMissouri.htm>

New Resources Regarding Foodborne Illness

Two new electronic resources are available regarding foodborne illness:

- An [e-card](#) entitled [Be Food Safe: Report Foodborne Illness](#), with tips on recognizing foodborne illness after attending an event.
- A [fact sheet](#) entitled [Be Food Safe: Report Foodborne Illness](#), with more information on foodborne illness and the importance of reporting the illness.



Information on food safety can be found at: <http://health.mo.gov/safety/foodsafety/>. For more information on foodborne illness, contact BCDP at 573-751-6113.

2012-2013 Influenza Season

Lesha Peterson and Peggy Hartman, BCDP

As of the week ending January 19, 2013 (Week 3), there have been 18,253 reported cases of influenza for the 2012-2013 Influenza Season.

Influenza B has been the predominant strain thus far this season. However, within the past few weeks, there has been an increase in reported influenza A cases. The total

as: Increased ILI and/or institutional outbreaks (ILI or lab confirmed) in at least half of the regions **AND** recent (within the past 3 weeks) lab confirmed influenza in the state.

Influenza Type	2012-13 Season	5-Season Median	% Change from 5-Season Median
Influenza A	3,915	861	354.5%
Influenza B	13,428	286	4595.1%
Influenza Unknown Or Untyped	910	80	1037.5%
Total	18,253	1,249	1361.4%

number of reported influenza cases is higher than usual for this time of the year. Influenza is cyclical and the peak can vary

from season to season. Based on historical data, influenza season often peaks in February. This year cases are occurring earlier than in recent seasons. However, it is not yet known when this seasons peak will be.

The MSPHL has received 114 specimens for viral testing so far this influenza season, 73 were positive for influenza. The breakdown is as follows:

- one 2009 Influenza A(H1N1),
- 28 Influenza A (H3), and
- 44 Influenza B.

For Week 3, Missouri reported **Widespread Activity** to CDC. Widespread Activity is defined

Resources: For Missouri's weekly influenza reports, go to: <http://www.dhss.mo.gov/living/healthcondiseases/communicable/influenza/reports.php>

For complete, up-to-date national information, go to: <http://www.cdc.gov/flu/weekly/fluactivitysurv.htm>

For information regarding the influenza vaccine, go to: <http://www.dhss.mo.gov/living/wellness/immunizations/whatsnew.php>

New Norovirus Strain found in Missouri

Jessica Bauer and Stephanie Schildknecht, MSPHL

In March of 2012, a new GII.4 norovirus was identified in Sydney, Australia. Since then, this virus has been associated with the vast majority of strains typed in South Australia and New Zealand and has replaced the GII.4 New Orleans (2009) variant in these countries.

According to Aron Hall, an epidemiologist with CDC's Viral Gastroenteritis Team, this new norovirus strain is beginning to be seen in the United States. He

says, "Through CaliciNet, we know that this virus has reached the United States shores and over the last three months has caused 14% of all norovirus outbreaks". Since this is a new norovirus, it has the potential to cause an increase in acute gastroenteritis.

Missouri is beginning to see this new strain of Norovirus. The November 2012 outbreak in Branson, Missouri involving tour buses from several states was

sequenced as Norovirus GII.4 Sydney. The MSPHL urges areas experiencing outbreaks of gastroenteritis to continue to submit specimens for testing so that the impact of this new virus can be tracked. A hyperlink to the MSPHL's Norovirus webpage has been added for the convenience of the readers. <http://health.mo.gov/lab/norovirus.php>

School Closures for Influenza-Like Illness (ILI)

Autumn Grim, BCDCP

Each year an average of 20,000 children, under the age of 5, are hospitalized because of influenza-related complications. Influenza (flu) causes more hospitalizations among young children than any other vaccine-preventable disease. Schools are instrumental in keeping their communities healthy by taking actions such as posting information about hand hygiene in restrooms, providing flu prevention messages in daily announcements, and being vigilant about cleaning and disinfecting classroom materials.

Often times, schools will close due to absenteeism from ILI. However, since school funding is directly related to the number of children present during the school day; the decision to close may be due to not only illness but funding as well. There is very little empiric evidence to suggest that closing schools does much in the way of interrupting transmission during seasonal flu periods. Most individuals may be able to



infect others beginning one (1) day before symptoms develop and

up to five (5) days after becoming sick. That means you may be able to transmit disease prior to even knowing you are sick. A student may feel fine today but be infectious and be at school infecting other children prior to their onset.

The best way to control ILI in school settings is to use everyday preventative actions during the seasonal flu period. CDC recommends a three-step approach to fighting flu:

1. The first and most important step is to get a flu vaccination each year.
2. If you get the flu, there are prescription antiviral drugs that can treat your illness. Early treatment is especially important for the elderly, the very young, people with certain chronic health conditions, and pregnant women.
3. Everyday preventive actions are steps that people can take to help slow the spread of germs that cause respiratory illness, like flu.
 - Cover your nose and mouth with a tissue when you cough or sneeze.
 - Wash your hands often



with soap and water.

- Avoid touching your eyes, nose, and mouth.
- Try to avoid close contact with sick people.
- If you become sick, stay home (or keep your child home) for at least 24 hours after fever is gone except to seek medical care or for other necessities.
- If an outbreak of flu or another illness occurs, follow public health advice.

CDC has developed a guide to help school administrators reduce the spread of seasonal influenza in schools. That document can be found at: <http://www.cdc.gov/flu/school/guidance.htm>

Note: Information for this article was taken directly from and adapted from the Centers for Disease Control and Preventions (CDC) website. <http://www.cdc.gov/flu/school/index.htm>

Upcoming Training

Principles of Epidemiology
April 2 – 4, 2013, Jefferson City
September 10-12, 2013, Jefferson City

For additional information and to access the registration forms, please visit the following web site: <http://health.mo.gov/living/healthcondiseases/communicable/communicabledisease/upcomingevents.php>

Legionellosis

C. Jon Hinkle, BCDCP

Legionellae are Gram-negative bacilli. There are 18 serogroups of *Legionella pneumophila*, of which serogroup 1 is most commonly associated with disease. Other *Legionella* species have been isolated, usually from immunosuppressed patients with pneumonia.

Legionellosis is a waterborne disease. The organism can be found in potable water systems (warm water showers), air conditioning cooling towers, humidifiers, whirlpool spas and decorative fountains. Conditions that favor the growth of *Legionella* are warm water temperatures (77°F – 107°F), stagnation, scale and sediment, and low disinfectant levels. The illness is transmitted when water containing *Legionella* bacteria is aerosolized and inhaled or aspirated. Legionellosis is not transmitted from person to person.

Legionellosis is associated with two clinically and epidemiologically distinct illnesses: Legionnaires' disease, which is characterized by fever, myalgia, cough, and clinical or radiographic pneumonia; and Pontiac fever, a milder illness without pneumonia. Only a small percentage of people exposed to *Legionella* will develop Legionnaires' disease, but a high percentage will develop Pontiac Fever. Due to the lack of severity, most cases of Pontiac fever go undiagnosed. Pontiac fever has been associated with exposure to non-viable *Legionella* and may be a hypersensitivity response to

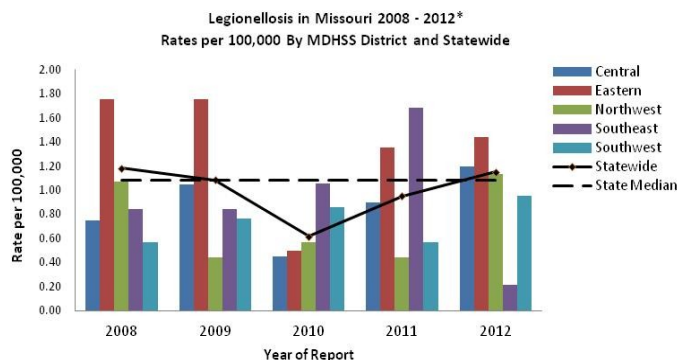
bacterial or other antigens rather than an infection.

Legionnaires' disease usually strikes middle-aged and older people, although cases have been reported in all age groups. The disease frequently occurs in people whose resistance to infection has been reduced, but apparently healthy people may also develop the disease. People suffering from cancer or chronic diseases are among those less able to fight infections. Cigarette smokers are more likely to contract Legionnaires' disease, perhaps because smokers are generally more likely than nonsmokers to develop respiratory tract infections.

The case definition in the current CDIRM has been superseded by a newer one, currently available on the CDC National Notifiable Disease Surveillance System (NNDSS) webpage [located here](#). The CDIRM section is under revision. Legionellosis may be classified as "Travel-associated" if the case has a history of spending at least one night away from home, either in the same country of residence or abroad, in the ten days before onset of illness. The supplementary case report form, [CDC 52.56](#), is available in the forms section of the CDIRM.

Over the past five years, Missouri has reported between 46 and 82 cases of Legionellosis per year. The chart below shows the rate of infection per 100,000 population for each of the DHSS Districts. The overall state rate and the statewide five-year median are illustrated by lines for comparison.

While not among the most common illnesses in Missouri, Legionellosis is still a significant public health concern. Legionnaires' disease can be a serious, potentially fatal illness. Those involved with operation and maintenance of aerosol producing facilities need to be particularly aware of the potential for causing infection to themselves and their patrons. Likewise, the public needs to be aware of the potential risks associated with such facilities and avoid those that might appear to be lacking proper maintenance. Those who are at increased risk of developing severe Legionnaires' disease, for example those who have a weakened immune system, may want to consider avoiding water systems that could be contaminated, such as spas or decorative "water features".



* Source: Missouri Health Surveillance Information System.
Confirmed and Probable Cases. By Year of Report. Some Data

New Procedure for Obtaining Latent TB Infection (LTBI) Medications

Lisa Eastman, BCDCP

The TB Control Program has identified issues regarding the treatment of some individuals as having LTBI, but based on the individuals' risk factors, should not have been categorized as having a LTBI. Therefore, they should not have been placed on a treatment regimen.

In an effort to remedy this issue, the TB Control Program is implementing a new process for obtaining LTBI medications effective **February 1, 2013**. This new process will require an LTBI Medication Request form (provided by the TB Control Program) to be submitted to the BCDCP TB Control Program for approval. Copies of the prescriptions for the requested LTBI medications must also be submitted with the LTBI Medication Request form. Once the TB Control Program has approved the medication request, the form and the prescriptions will be submitted to the contracted pharmacy, and the

Local Public Health Agency will be notified. After the LPHA has been notified, the original prescription(s) must be mailed to the contracted pharmacy, as is currently done. If the TB Control Program does not agree with the request for LTBI medications, the LPHA will be informed of the reason. The TB Program will send out the LTBI Medication Request form on the Communicable Disease List Serv and it will be added to the Appendices chapter of the DHSS TB Case Management Manual, which can be found at <http://health.mo.gov/living/healthcondiseases/communicable/tuberculosis/tbmanual/index.php>

This process is for LTBI medications only, and does not affect the process for requesting medications for the treatment of active TB.

This new process is hoped to reduce the number of persons

incorrectly receiving LTBI treatment. This in turn will reduce workload for those LPHAs who were providing medications and monitoring these individuals during their treatment. In addition, it will reduce the costs to the DHSS TB Control Program on medications and their distribution.

For information on testing for LTBI and categorizing Tuberculin Skin Test (TST) results for the diagnosis of LTBI, please see the CDC *Core Curriculum on Tuberculosis: What the Clinician Should Know*, Chapter 3, pages 53 and 54 (<http://www.cdc.gov/tb/education/corecurr/pdf/chapter3.pdf>).

If you have questions regarding the process for LTBI medication requests, please contact me at (573) 751-6113, or Lisa.Eastman@health.mo.gov or Traci Hadley at (417) 629-3487 or Traci.Hadley@health.mo.gov.

Warming Centers

Lori Harris and Carol Braun, BEE

Warming centers provide a heated place for people to go for a few hours during extremely cold weather. A [Warming Center map](#) can be found on the DHSS Home page. This interactive map provides information on warming centers throughout the state. If you know of warming centers that are not on the DHSS map, please email the center's name, street address, phone number and hours of operation, to Carol.Braun@health.mo.gov or Lori.Harris@health.mo.gov. The list will be updated as we receive information about warming centers.

Reports of cold related illness and death reports should be sent to Carol Braun, Bureau of Environmental Epidemiology or faxed to (573) 526-6946.

Shiga toxin Producing *E. coli* (STEC) Infections Reported in Missouri - 2012

Drew Pratt, BCDP

Shiga toxin-producing *Escherichia coli* (STEC) cases accounted for a significant portion of Missouri's reportable condition morbidity in 2012. Among the 243 culture-confirmed STEC cases reported, seven different types were identified, with *E. coli* O157:H7 accounting for 62% of the cases (see Figure 1).

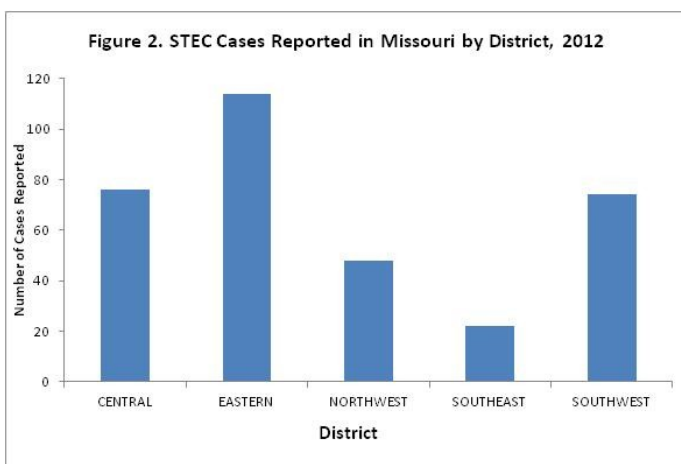
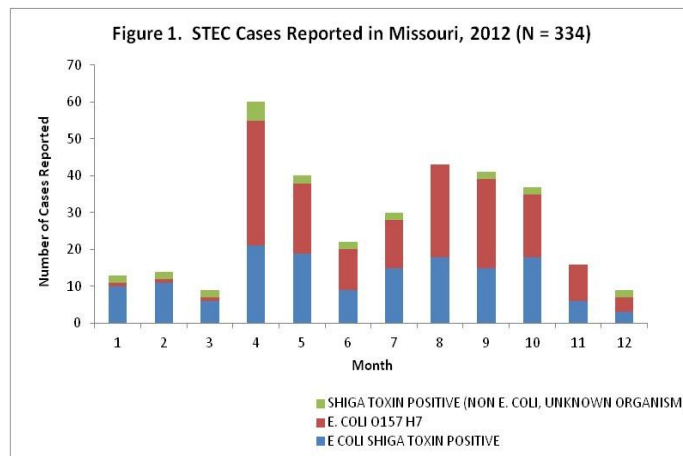
More than a third of the 334 confirmed, probable and suspect STEC cases were hospitalized, and approximately 30 % of all the cases were persons five years of age younger. This age group is typically at highest risk for developing complications, and may also be more likely to transmit the disease to others (e.g. in the child care setting or to other household members).

There were 18 cases of Hemolytic Uremic Syndrome (HUS) reported in 2012, 14 of whom had laboratory evidence of a STEC infection. All 18 cases were hospitalized and one patient, a two-year-old, died from

the illness. Children ages five years or younger represented 72% of the HUS cases this past year.

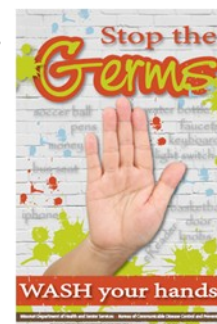
Four STEC outbreaks were identified in 2012, which made a significant impact on the total morbidity in the Central, Eastern and Southeast Districts (see Figure 2). Three of the four outbreaks were determined to be food-borne, with possible sources including unpasteurized dairy products and alfalfa sprouts. Putting resources into surveillance for STEC cases and efforts to educate Missourians about how to prevent STEC

infections (especially among those at increased risk for serious illness and high rates of transmission) continue to be priorities for public health officials.



Stop the Germs - New

An average adult can touch as many as 30 objects within a minute, including germ-harboring, high-traffic surfaces such as light switches, doorknobs, phone receivers, and remote controls. A recent study in the Journal of Medical Virology reported that cold and flu viruses can survive for 18 hours on hard surfaces. DHSS's Bureau of Communicable Disease Control and Prevention has a poster available that teaches about these unseen bacteria breeding grounds. The laminated 11 X 17 poster is titled **Stop the Germs – Wash Your Hands** (stock number #8). The poster suggests that items such as student water bottles, keyboards, pens, soap dispensers, sports equipment – all likely harbor germs that can cause colds and flu in your classrooms. Use this [order form](#) to fax to the DHSS warehouse at 573-751-1574 to receive one copy of the poster. For more information contact Leshia.Peterson@health.mo.gov.



Multi-State Outbreaks

CDC's Outbreak Response Team collaborates with the national network of epidemiologists and other public health officials who investigate outbreaks of foodborne, waterborne, and other enteric illnesses in the United States. Here are links to several recent outbreaks.

- Multistate Outbreak of *Salmonella* Bredeney Infections Linked to Peanut Butter Manufactured by Sunland, Inc. A total of 42 persons infected with the outbreak strain of *Salmonella* Bredeney have been reported to [PulseNet](http://www.cdc.gov/pulsenet) from 20 states since June 14, 2012. <http://www.cdc.gov/salmonella/bredeney-09-12/index.html>
- Six Multistate Outbreaks of Human *Salmonella* Infections Linked to Small Turtles. A total of 248 persons infected with outbreak strains of *Salmonella* Sandiego, *Salmonella* Pomona, and *Salmonella* Poona have been reported from 34 states. <http://www.cdc.gov/salmonella/small-turtles-03-12/index.html>
- Multistate Outbreak of *Salmonella* Montevideo Infections Linked to Live Poultry in Backyard Flocks. A total of 93 persons infected with the outbreak strain of *Salmonella* Montevideo were reported from 23 states and Puerto Rico. <http://www.cdc.gov/salmonella/montevideo-06-12/index.html>
- CDC is investigating a multistate outbreak of fungal meningitis and other infections among patients who received contaminated steroid injections. As of January 7, 2013, there have been 664 reported cases from 19 states. There have been 40 reported deaths. A total of 54 patients have CDC laboratory-confirmed fungal meningitis. This form of fungal meningitis is not contagious. <http://www.cdc.gov/HAI/outbreaks/meningitis.html>

For additional information regarding outbreaks, see CDC's Outbreak Response Team's main web site: <http://www.cdc.gov/outbreaknet/index.html>

Student Outbreak Response Team (SORT)

Cindy Butler, BCDCP

The Missouri State Epidemiologist, Dr. George Turabelidze, MD, and the Eastern District BCDCP team have joined forces with faculty members from St. Louis University School of Public Health (SLU-SPH) to develop a student interviewer team. The team consists of second year MPH students at SLU-SPH. SORT assistance for LPHAs in Missouri is to supplement local management practices during outbreak investigations. Team members will be available to

LPHAs at no charge. SLU-SPH has agreed to provide a telephone bank and computers for students to work confidentially in a designated area. The Eastern District staff have conducted training sessions, and the team is prepared to conduct telephone interviews on nights and weekends. SORT can do data entry if necessary, and perform other support functions. To request SORT assistance contact your District Communicable Disease Coordinator, or the Department Situation Room after

normal working hours at 800-392-0207. At that time, please be prepared to discuss the details of the investigation. In addition, please provide a draft of your outbreak questionnaire, if available, and any special instructions and special skills needed. Some of the students are fluent in languages other than English. Participating students are excited for the opportunity to gain direct experience in the field of applied epidemiology and practical experience with conducting interviews.

Botulism in an Infant

Douglas B. Baker, D.V.M., BCDCP

Botulism is a rare but serious paralytic illness caused by a nerve toxin that is produced by the bacterium *Clostridium botulinum*. There are five main kinds of botulism.

1. Foodborne botulism, caused by eating foods that contain the botulinum toxin.
2. Wound botulism, caused by toxin produced from a wound infected with *Clostridium botulinum*.
3. Infant botulism, caused by consuming the spores of the botulinum bacteria, which then grow in the child's intestines and release toxin.
4. Adult intestinal toxemia (adult intestinal colonization) botulism is a very rare kind of botulism that occurs among adults by the same route as infant botulism.
5. Iatrogenic botulism can occur from accidental overdose of botulinum toxin.

All forms of botulism can be fatal and are considered both medical and public health emergencies. Botulism is a select, high priority disease and should be reported immediately to the local health authority and to DHSS.

The classic symptoms of botulism include double vision, blurred vision, drooping eyelids, slurred speech, difficulty swallowing, dry mouth, and muscle weakness. Infants with botulism appear lethargic, feed

poorly, are constipated, and have a weak cry and poor muscle tone. These are all symptoms of the muscle paralysis caused by the bacterial toxin. If untreated, these symptoms may progress to cause paralysis of the respiratory muscles, arms, legs, and trunk. In foodborne botulism, symptoms generally begin 18 to 36 hours after eating a contaminated food, but they can occur as early as 6 hours or as late as 10 days.

In the United States, an average of 145 cases are reported each year. Of these, approximately 65% are infant botulism, 20% are wound, and 15% are foodborne. Infant botulism is defined as occurring in children less than one year old. Adult intestinal colonization and iatrogenic botulism rarely occur. Outbreaks of foodborne botulism involving two or more persons occur most years and are usually caused by home-canned foods.

In the period from January 2003 to December 2012, seven cases of infant botulism were reported and confirmed in the State of Missouri. The most recent case was in 2012 in a child from the Southwest District. The child presented with classic infant botulism symptoms and the attending physicians quickly identified botulism as the most likely cause. The suspected mode of exposure was ingestion

of botulism spores from dust. They were able to initiate appropriate and timely therapy and the child recovered. The only drug currently available to treat infant botulism is Botulism Immune Globulin Intravenous-Human (BIG-IV or BabyBIG).

The bacteria and species that causes infant botulism can be found in soil and dirt. The bacteria and species can be found inside homes on floors, carpet, and countertops even after cleaning. Honey can contain the bacteria that causes infant botulism so, children less than 12 months old should not be fed honey. Honey is generally safe for persons one year of age and older.

Foodborne botulism often occurs in relation to home-canned foods with low acid content, such as asparagus, green beans, beets and corn, and is caused by failure to follow proper canning methods. However, seemingly unlikely or unusual sources are found every decade, with the common problem being improper handling during manufacture, at retail, or by consumers. Persons who do home canning should follow strict hygienic procedures to reduce contamination of foods, and carefully follow instructions on safe home canning. Because the botulinum toxin is destroyed by high temperatures, persons

[Continued on next page](#)

Botulism in an Infant, continued.

who eat home-canned foods should consider boiling the food for 10 minutes before eating it to ensure safety. Wound botulism can be prevented by promptly seeking medical care for infected wounds and by not using injectable street drugs.

Laboratory examination or culturing of specimens is routinely available only from CDC. Arrangements for such testing must be made through your District Communicable

Disease Coordinator or the Department Situation Room (800-392-0272), and the MSPHL.

Information for this article was taken and adapted directly from CDC's website: <http://www.cdc.gov/nczved/divisions/dfbmd/diseases/botulism/>

Information on botulism antitoxin can be found at: <http://www.fda.gov/BiologicsBloodVaccines/BloodBloodProducts/ApprovedProducts/>

[LicensedProductsBLAs/FractionatedPlasmaProducts/ucm089339.htm](http://www.fda.gov/oc/ohrt/LicensedProductsBLAs/FractionatedPlasmaProducts/ucm089339.htm)

Information on how to obtain botulism antitoxin can be found at <http://www.infantbotulism.org/>. Additional information about investigation, control, and treatment can be found at: <http://health.mo.gov/living/healthcondiseases/communicable/communicabledisease/cdmanual/pdf/Botulism.pdf> and <http://health.mo.gov/lab/pdf/BotulinumFactSheet.pdf>

Reported Number of Missouri Tuberculosis Disease Cases
For MMWR Weeks 1-48, 2011 versus 2012

Geographic Area	Number of Counted Cases: 2011	Number of Counted Cases: 2012	Difference in Number of Counted Cases:	Percent of 2012 Cases that were Preventable*
St. Louis City	21	10	-11	10%
St. Louis County	18	16	-2	13%
Kansas City	15	13	-2	23%
Springfield/Greene	2	1	-1	0%
<u>Region (excluding metropolitan areas)</u>				
Northwestern	5	9	4	0%
Central	5	6	1	0%
Southeastern	9	9	0	0%
Southwestern	6	8	2	0%
Eastern	4	7	3	14%
Institutionalized Patients**	1	0	-1	0%
TOTAL***	86	79	-7	9%

* A Preventable TB case is:

- A person with a previous positive TB skin test who is a candidate for treatment and not offered treatment.
- A person with a risk factor for TB who is never offered a TB skin test.
- A secondary case to a preventable case.

** Institutionalized patients are those individuals who are incarcerated in federal or state prisons.

*** The total percent of preventable cases is derived by dividing the total number (not percentage) of preventable cases by the total number of 2012 counted cases.

SOURCE: Provisional Data from the Tuberculosis Information Management System (TIMS). Subject to change.



Web sites



Missouri Department of Health and Senior Services — www.health.mo.gov/

Influenza — <http://www.health.mo.gov/living/healthcondiseases/communicable/influenza/reports.php>

West Nile Virus — <http://www.health.mo.gov/living/healthcondiseases/communicable/westnilevirus/>

Statistical Reports from BCDP — <http://www.health.mo.gov/living/healthcondiseases/communicable/communicabledisease/reports.php>

Avian Influenza (Bird Flu) - CDC — www.cdc.gov/flu/avian/index.htm

CDIRM — <http://www.health.mo.gov/living/healthcondiseases/communicable/communicabledisease/cdmanual/index.php>

TB Case Management Manual — <http://www.health.mo.gov/living/healthcondiseases/communicable/tuberculosis/tbmanual/index.php>

A Little Humor



Under a high magnification of 6500X, this colorized scanning electron micrograph depicts a large group of Gram-negative _____ bacteria.

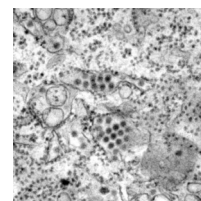
- A. *Klebsiella pneumoniae*
- B. *Pseudomonas aeruginosa*
- C. *Legionella pneumophila*
- D. *Clostridium difficile*



Source: CDC

Answer for Issue 35:

B. Dengue



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**** Information contained in
this report may be provisional.**

"...Without health there is no happiness. An
attention to health then should take the place of
every other object."

Thomas Jefferson, 1787

Commonly Used Acronyms

BCDCP - Bureau of Communicable Disease Control and Prevention
CDC - Centers for Disease Control and Prevention
CDIRM - Communicable Disease Investigation Reference Manual
DHSS - Department of Health and Senior Services
ESSENCE - Electronic Surveillance System for the Early Notification
of Community-based Epidemics system
FDA - U.S. Food and Drug Administration
LPHA - Local Public Health Agency
MSPHL - Missouri State Public Health Laboratory
PCR - Polymerase chain reaction
TB - Tuberculosis
U.S. - United States

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